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CREDIT UNIONS IN THE FINANCIAL MARKETS IN NIGER: THE ENTERPRISE SECTOR IN NIAMEY

by

Mayada M. Baydas

Korotoumou Ouattara

and

Douglas H. Graham

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Rural Finance Program
Department of Agricultural Economics
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210-1099

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I. INTRODUCTION

1. Purpose of the Study

This paper reports on the enterprise sector in Niamey, the capital of Niger. The main focus of our analysis is to examine the financial services that entrepreneurs draw upon to finance their enterprises. In addition to the services offered by formal financial institutions, banks and non-banks, entrepreneurs draw upon a complex set of informal contracts with various economic agents. These contracts are used for both savings and loan purposes. An assessment of the role and performance of formal financial institutions, banks and non-banks, is not sufficient to evaluate the entrepreneurs' demand for and use of alternative financial services. Studies of formal financial institutions typically focus on examining the viability of these institutions, the services they provide, and the profile of their member clientele. Many questions about the clients' use of other financial services and the relative importance of the services offered by the institution in question in the members and non-members' financial portfolios remain unanswered. One of the puzzling questions is what are the preferred sources of finance that entrepreneurs use to fund their operations? Is the popular belief that formal financial markets discriminate against small scale enterprises, true or is it a misconception? This assumption, often based on reported responses of entrepreneurs that finance is the main constraint they face. The primary purpose of this research is to analyze the entrepreneurs' choice of the sources of funding new investments and operations of the firm and examine the determinants of the capital structure of micro and small scale enterprises (SMEs) in the manufacturing sector in Niamey.

This paper deals primarily with a survey of manufacturing enterprises in Niamey. The introduction presents an overview of manufacturing enterprises in Niger. The following section reports on the enterprise survey outlining, first, various economic and business characteristics of the enterprises and entrepreneurs and second, highlighting the significance of the existing financial channels entrepreneurs use in financing their operations. The third section examines the capital structure determinants among the manufacturing enterprises in Niamey. The fourth, and last section, summarizes the findings and discusses some implications.

2. Manufacturing Enterprises in Niger

The limited role of manufacturing enterprises in many Sub-Saharan African (SSA) countries implies a persistent need to examine the real constraints affecting their growth. A comparison of the share of manufacturing in the gross domestic product (GDP) between 1965 and 1989 in SSA indicates an insignificant increase from 8 percent in 1965 to 11 percent in 1989. Coupled with the declining or at best slow growth rates for other sectors in the economies of SSA countries, these figures seem particularly alarming when compared with the rapid rates of population growth. Projections of employment in SSA countries indicate that the 27 million individuals operating micro and small scale enterprises in 1985 increased to 39 million in 1990 and are expected to reach 73 million in the year 2000 and 206 million in the year 2020 (World Bank, 1989). It is speculated in The World Bank Long-Term Perspective Study on Sub-Saharan Africa that only a few countries will host large scale industries that will provide employment to wage laborers (World Bank, 1989). However, manufacturing sub-sectors, such as food processing, tailoring, wood processing and metal fabrication among others, will provide ample opportunities for small and medium scale enterprises. Consequently, job creation in the manufacturing sector will be an important source of employment.

In Niger, similar to other countries in SSA, population growth is high. World Bank projections indicate that the 8 million Nigeriens in 1991 will be competing with an additional 14 million for resources as the population size is expected to reach 22 million in 2025[1]. The trend in the manufacturing sector's contribution to GDP is also similar to that of the region. The share of manufacturing in GDP has been stagnant at about 7 percent for the past two decades. However, an additional indicator of manufacturing performance, i.e. Manufacturing Value Added (MVA),[2] indicates that the ratio of MVA/GDP in Niger over the past two decades has recorded an insignificant increase from 4.5 in 1970 to 6.6 in 1986. These figures present evidence of slow but positive growth over the past decade. Many macroeconomic factors have contributed to this trend.

The performance of the various sectors of the Nigerien economy has varied over the past decade. While services which comprised 46 percent of GDP in 1992 grew at a rapid rate, agriculture which comprised 37 percent of GDP in 1992, has been declining (World Development Report, 1993). Industry, however, has been stagnant at roughly 17 percent of GDP. Manufacturing, which contributed to about 7 percent of GDP in 1992, compared to 5 percent in 1970, has been stagnant over the past two decades.

We focus primarily on four of the more dynamic sub-sectors in the manufacturing sector in our field survey in Niamey. These are textile-garment manufacturing, furniture-wood processing, metal workshops and bread-food processing (or bakeries). These four sub-sectors capture two important factors that affect the operations and growth of enterprises in the manufacturing sector. First, the consideration of these four sub-sectors allows us to cut across the various size categories

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[1] World Development Report, 1993.

[2] "Manufacturing Value Added (MVA) is the difference between the gross output of the manufacturing sector and the sum of physical purchases and service inputs before any provision is made for depreciation." (Riddell, 1990 p. 24).

of enterprises, micro, small and medium scale enterprises.[3] Second, input materials used by these manufacturing enterprises are different. This implies that entrepreneurs have a variety of contracts with the domestic suppliers and buyers through various arrangements.

II. CHARACTERISTICS OF THE ENTERPRISE SURVEY

1. Overview of The Survey

To examine the alternative financial networks in the manufacturing sector in Niger a survey of micro, small and medium scale manufacturing enterprises was carried out in April and May of 1995. The survey randomly selected 60 members from three Caisse Populaire d'Epargne et de Crédit (CPECs) in Niamey to examine their entrepreneurial activities and financial transactions[4]. These CPECs are the oldest CPEC established in Niamey (USAID/CPEC), Yancin kai; an all women CPEC, Diyauci; and a mixed gender CPEC, Adaka Albarkanta. Moreover, the survey included 131 randomly selected entrepreneurs in the manufacturing sector in Niamey. Roughly, half of the CPEC members engaged in trading activities and the other half were salaried employees. The enterprise survey, thus, comprised of 159 enterprises in four manufacturing sub-sectors and the trading sector. The surveyed enterprises were selected in Niamey because it is the only region in the country in which one finds a large and diverse number of manufacturing enterprises across various sub-sectors and size categories that could provide information about the issues in question.

A. Economic and Business Characteristics of the Enterprises

The enterprise survey covered four manufacturing sub-sectors in addition to the trading sector. These consisted of tailoring workshops, furniture and wood processing enterprises, metal workshops, food processing bakeries and traders. About 40 enterprises were surveyed in each of the three sub-sectors of tailoring, furniture and metal workshops, 12 bakeries that constituted most of the bakeries in Niamey, and 25 traders. Table 1 provides the breakdown of the share and the number of enterprises in each sub-sector in the sample. Data in table 1 also show that over half of these enterprises (62 percent) are microenterprises, while the rest are small scale enterprises. There are only two medium scale enterprises in the survey. Given that this was a random walk survey of manufacturing enterprises in Niamey, this distribution likely reflects the size composition of most manufacturing enterprises. Most of the enterprises have been in business for over five years. The average enterprise has been in operation for 12 years and possesses total physical assets worth FCFA 2,488,000 (US$ 4,976)[5] on average. Typically, businesses start with an average of three employees

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[3] The classification of the size of enterprises is based on the number of employees. Enterprises with: 0-4 employees are microenterprises; 5-29 are small scale enterprises; 30-99 are medium scale enterprises; and 100 or more employees comprise large scale enterprises.

[4] There were seven CPECs in Niamey as of March, 1995.

[5] The exchange rate at the time of the survey was FCFA US$ 1 = 500.

and currently employ an average of five workers. This implies that businesses on average start as microenterprises and later fall in the small scale category. Enterprises on average have one apprentice who learns on the job and no more than one family member who assists in the enterprise. Moreover, the majority of the employees are men with about half of the workers full-time workers in the enterprise.

B. Characteristics of the CPEC Members versus Non-Members

Over half of the total sample of entrepreneurs and non-entrepreneurs (60 percent) knew of the existence of CPECs in Niger. However, only about one third of the total sample (32 percent) who were randomly selected from the CPEC files are members of the CPECs. There were no CPEC members among the random survey of manufacturing entrepreneurs in Niamey. Among the non-members, when asked why they did not join the CPECs, most of those who responded reported that they did not know about the CPECs while few reported that they were not interested in becoming members or did not have extra money to deposit in CPECs. Among the CPEC members, when asked if they found the various CPEC services attractive, the vast majority (93 percent) responded that they were interested in the savings accounts, more than two thirds (72 percent) were also interested in the possibility of obtaining a loan, about half (52 percent) also found the interest paid on savings attractive, again about half (44 percent) found the CPECs conveniently close, and finally, more than half (62 percent) appreciated the confidentiality about their CPEC accounts. The most attractive service ranked by half of the CPEC members was the saving facility; however, about one quarter of the members found the possibility of obtaining a loan the most important service offered by the CPEC.

The socio-economic characteristics of the CPEC members and non-members recorded in the survey include gender, marital status, educational level, other business activities, age, and household size (Table 2). The gender composition of the total sample is 25 percent women and 75 percent men. The gender composition differs between CPEC members and non-members as the majority of non-members (95 percent) are men, whereas among members about two thirds (67 percent) are women. Interestingly, even married individuals keep separate financial accounts from their spouses in Niger. This is to many other countries in Sub-Saharan Africa. In the sample, 69 percent of members and non-members are married while 31 percent are either single or divorced. The average age of the individual is 37 years and his/her average household is 7 members. The majority of CPEC members and non-members are household heads (71 percent), however only a few members and non-members (19 percent) have another private business. Most CPEC members and non-members are fairly literate. One fourth (25 percent) have completed at least basic education and another quarter (25 percent) have completed secondary education. About one third of the sample are illiterate (36 percent), and finally, a small number (16 percent) are high school graduates.

C. Size Differences

Characteristics of the enterprise vary to some extent based on their size category (Table 3). Microenterprises, that constitute about 60 percent of the total sample, are largely old established

businesses that have been in operation for 12 years on average. These businesses have employed on average only one employee at start-up and continue to employ on average only one employee currently. About one fourth of the microenterprises in the survey (23 percent) are run by female entrepreneurs and the average value of their physical assets is FCFA 265,000. Similarly, small scale enterprises have been in operation for 12 years on average; however, these enterprises employ an average of seven workers at start-up and an average of nine workers currently. The majority of small scale enterprises are operated by male entrepreneurs (95 percent), and have an average value of physical assets of about FCFA 5.5 million on average. About one fourth of the microentrepreneurs (27 percent) are CPEC members and about 20 percent have another private business. In contrast, however, only 2 percent of the small scale entrepreneurs are CPEC members, but again about 17 percent have another private business. The sectoral distribution of both micro and small scale enterprises are similarly concentrated in the tailoring, furniture-wood processing and metal work sub-sectors. On the one hand, most of the bakeries are small scale enterprises, with the exception of two bakeries that are medium scale and one microenterprise. On the other hand, all of the traders run microenterprises with no exception.

D. Gender Differences

Characteristics of the enterprise vary to some extent based on the gender of the entrepreneur (Table 4). The most striking difference is associated with the size of these enterprises. On the one hand, female operated enterprises on average start as micro businesses with only one employee and continue operation within this size category with only one employee. On the other hand, male operated enterprises start as microenterprises with four employees and continue operation in the small scale size category with five employees. Moreover, the average value of physical assets for male entrepreneurs is almost FCFA 3 million while for female entrepreneurs the average value of physical assets is only FCFA 194,000. Therefore, it is not surprising that the majority of female entrepreneurs (88 percent) currently run microenterprises and only very few (11 percent) operate small scale enterprises. Almost half of the male entrepreneurs (41 percent), however, run small scale enterprises and the other half (57 percent) run microenterprises. Another gender variation can be found in the CPEC membership (Table 4). Only very few of the male entrepreneurs are CPEC members while more than two thirds of the female entrepreneurs (73 percent) are CPEC members. Similarly, about one third of the female entrepreneurs (35 percent) have a secondary occupation while only few of the male entrepreneurs (16 percent) have a secondary occupation. Finally, only half of the female entrepreneurs (50 percent) are heads of their households while the majority of the male entrepreneurs (80 percent) are heads of their households.

E. Sub-Sector Variations

Sub-sector analysis entails examining commodity-specific sub-sectors, that help identify competing and supporting channels of micro, small and medium scale enterprises. This methodology allows for the study of the role of the various economic agents, the terms and conditions of their contracts, the linkages in their transactions and the constraints affecting the different economic units in a certain market. Thus, by considering an industry or sub-sector

classification, similarities and differences among firms may be identified that explain variations in the performance of enterprises across different sub-sectors. However, prior to analyzing the differences in the contracts between entrepreneurs and their suppliers and customers and the performance of these enterprises, it is useful to quickly review the differences in the characteristics of the establishments across the sub-sectors under study.

a) Characteristics of the enterprise

Enterprises operating in the bakeries sub-sector have the largest average value of physical assets (FCFA 27 million) followed, second, by metal work enterprises (FCFA 918,000), third by furniture manufacturers (FCFA 437,000), fourth by tailoring workshops (FCFA 289,000), and fifth by traders who reported an average value of physical assets of only FCFA 78,000 (Table 5). Bakeries, on the one hand, possess modern ovens and large mixing equipment. Traders, on the other hand, do not possess the machinery and equipment manufacturers utilize, therefore, it is not surprising that traders have a considerably lower average value of physical assets than the other entrepreneurs in the sample. On average, enterprises in the five sub-sectors have been operating their businesses between 11 and 13 years.

Industry classification is associated with the concentration of micro and small scale enterprises in certain sub-sectors (Table 5). Statistics in table 5 indicate that the majority of enterprises across the sub-sectors of tailoring (68 percent), furniture (60 percent) and metal workshops (51 percent) and trading (100 percent) fall in the microenterprise category. The majority of bakeries (75 percent), however, are currently small scale businesses while only two (17 percent) are medium scale enterprises. Tailoring, furniture processing and metal work sub-sectors in the survey, by contrast, have about one third of the enterprises in the small scale category. Moreover, traders are largely a sole entrepreneur operation compared to the other entrepreneurs that employ about five workers on average. Bakeries and furniture workshops employ one family member who assists in the enterprise on average. Tailors, metal workshops and traders do not appear to employ family members for labor.

The average number of employees over the life-cycle of the enterprise does not seem to change. This is evident from the trends in the average number of employees the firm starts with initially and the current number of employees (Table 5). Most enterprises across the five sub-sectors do not seem to experience a major change in the number of employees at start-up versus the current employment figures. The average annual growth rate for enterprises measured by the change in number of employees over the number of years the enterprise has been in operation indicates that furniture manufacturers have experienced the highest growth rate followed, second, by bakeries, third by metal work enterprises, and last by tailoring enterprises. Traders do not seem to grow in size since they rarely hire permanent employees. Another significant observation from the traders in the sample, is that the majority are CPEC members, whereas the majority of entrepreneurs in the other sub-sectors have not joined the CPECs.

The gender composition of the entrepreneurs in the five sub-sectors differs largely. Three of the five sub-sectors, furniture and metal workshops and bakeries are 100 percent dominated by male entrepreneurs. Moreover, the majority of the tailors (80 percent) are male entrepreneurs. Among the traders, however, about two thirds (72 percent) are women entrepreneurs. These distributions are not surprising given that the Nigerien culture is a male dominated society and the manufacturing sector is largely a man's world. The predominance of women in the trading sector in the sample is a result of interviewing women CPEC members who engage in commerce.

Examining the number of years entrepreneurs have been in business in the various sub-sectors in the study, it seems that most entrepreneurs have been in operation for over five years (Table 6). Table 7 provides further characteristics of the enterprises by their stage of operation. Among the interesting observations is that more women entrepreneurs operate businesses for less than five years than there are women entrepreneurs operating businesses for more than five years. Moreover, although businesses are expected to grow in size as they become more established, there are more microenterprises in the survey as businesses grow older than two years.

b) Contractual relations with suppliers and customers

Sub-sector variations imply differences in the vertical linkages and contracts in the distribution or production of goods among the different economic agents. These variations are mainly manifested in the existing contracts between entrepreneurs and their suppliers and customers across different sub-sectors. The linkages between input suppliers and entrepreneurs as well as the linkages between entrepreneurs and their customers in the enterprise sector in Niger present a complex variety of contracts across the five sub-sectors under study.

The majority of the entrepreneurs in the sample purchase input materials in the domestic market from national or local traders (Table 8). Nevertheless, some of the raw materials are purchased from importers or in a few cases from cooperatives or even non-governmental organizations (NGOs). Half of the enterprises, those concentrated in the furniture, metal work and bakeries, tend to purchase their major inputs from a single supplier. In the cases where entrepreneurs purchase raw materials from one supplier the duration of their relationship, on average, is more than three years. Entrepreneurs in the trading sector, in general, purchase from multiple suppliers and have a short term relationship with their suppliers.

The relationship between suppliers and entrepreneurs typically influences the nature of the sale contract between these economic agents. Entrepreneurs who purchase inputs on credit typically buy from one or two suppliers. This relationship reduces transaction costs and helps resolve part of the asymmetric information problem that is often encountered between the principal-lender and the agent-borrower in credit contracts.[6] The majority of the entrepreneurs in the sample purchase inputs in cash. A few entrepreneurs advance partial payment on occasion to their suppliers to secure access

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[6] See Stiglitz and Weiss (1981) for a discussion of asymmetric information problems in credit markets.

to the types of input materials they need. A number of the entrepreneurs in both the metal work and furniture sub-sectors (26 and 10 percent respectively) purchase some inputs on credit. A few bakers and very few traders (8 and 4 percent respectively) purchase some inputs on credit. None of the entrepreneurs in the sample buy inputs on consignment. The supply of trade credit by input suppliers is dependent on the type of commodity and the degree of competition among suppliers in the market. The higher the degree of competition, the more incentive there is for traders to offer trade credit as a marketing tool to sell their commodities. Moreover, the more perishable the commodity is, the more incentive there is for traders to offer trade credit to reduce storage period and potential damage.

Products manufactured by these enterprises are largely sold in the domestic market (Table 9). The majority of the output in the five sub-sectors is sold directly to local consumers. About 10 percent of the entrepreneurs in each sub-sector sell to local retailers in the same market and only a few traders sell to local retailers in other markets. Typically, entrepreneurs sell to various clients, except in the case of bakers who sell to their regular clients with whom they have a long term relationship. With respect to the sale of output, entrepreneurs in all sub-sectors sell in cash, on credit and with advance payment. The majority of the entrepreneurs in the furniture, metal and tailoring sub-sectors (45, 51 and 37 percent respectively) sell after receiving advance payments, while only about half of these entrepreneurs sell in cash and very few allow for some credit to particular customers. Almost all the entrepreneurs operating bakeries (75 percent) sell bread on credit while most of the traders (72 percent) sell in cash directly to consumers.

The nature of the product and its value directly affect the method of payment. Most of the furniture, metal and tailoring products are custom-made, and therefore, require advance payment as a guarantee or deposit to allow the entrepreneur to purchase input material. Tailors and seamstresses in general do not have to buy the cloth which is the most expensive input material, because customers bring their own materials. Bakers, however, sell to consumers or local retailers on short-term credit because they need to market the bread immediately.

Entrepreneurs purchasing input material on credit and/or selling products after receiving advance payments are engaged in trade credit contracts. This is one of the most important sources of financing working capital for many manufacturing enterprises in both developing and developed capital markets. The significance of this source of financing will be discussed next and will be tested subsequently in the capital structure model.

2. Significance of the Existing Financial Channels

The sources of funding and the savings channels entrepreneurs draw upon are various. They fall into informal and formal networks. The informal channels that were found to prevail in Niger include family, friends, suppliers credit, customer advances, tontines (Rotating Credit and Savings Associations, or RoSCAs), and money keepers. Formal channels reported used by the entrepreneurs include commercial banks, CPECs and non-governmental institutions (NGOs).

A. Sources of Funds for Investments

Funds for the latest capital investments were provided from personal savings for most of the entrepreneurs (73 percent) in the sample (Table 10). Only a very small number of entrepreneurs reported taking an informal or formal loan to invest in their businesses (6 and 7 percent respectively). Figures in table 10 indicate that the source of funds for investments do not vary much by sector of operation. These statistics indicate, however, a slightly higher percentage of usage of formal loans by entrepreneurs in the trading sector than for entrepreneurs in the other sectors. The formal sources of finance for investment comprise roughly of 3 percent from banking institutions, 2 percent from CPECs, and 1 percent from semi-formal NGOs. The time for loan approvals from banks varied between two weeks and two months, while loan approvals from CPECs were generally granted within two to seven days. The loan term varied from 5 to 12 months for bank loans and from six to seven months for CPEC and NGO loans. Informal loans, however, were generally granted for a shorter period of time ranging from a few days to a few months. Most bank loans required guaranties, while only half of the CPEC loans required guaranties, and very few of the semi-formal and informal loans required guaranties. The average loan amount for investment varied depending on the source of the loan. The average bank loan for the six individuals who received loans was FCFA 1,816,665, the average CPEC loan for the four individuals who received loans was FCFA 84,995, the average informal loan for the 12 individuals who received informal loans was FCFA 326,669 and average semi-formal loan from NGOs for the two individuals who received loans was FCFA 169,990.

B. Sources of Financing Current Operations

Sources of finance for current operations include both informal and formal channels, although they are concentrated on informal agents. First, the majority of the entrepreneurs (96 percent) operating in the five sub-sectors reported that they use retained earnings as a source of financing their current operations (Table 10). Second, about 18 percent of the entrepreneurs in the five sub-sectors reported that they draw upon informal sources of finance from other enterprises, or family and friends in their current operations. Informal loans are more significant in the case of the metal workshops than entrepreneurs operating in the other sub-sectors. A large share of the entrepreneurs in this sub-sector (39 percent) borrow on an informal basis for their businesses. Almost one fourth of the furniture manufacturers (20 percent) also draw upon informal sources for small and short term loans, often in-kind, that is, mostly unprocessed timber. This source may not be as important in the case of tailoring, traders and bakeries as only a few entrepreneurs in each of these sub-sectors (7 percent of the tailoring, 16 percent of the bakeries and 12 percent of the traders) reported using informal sources of financing in their current operation. Among the employees in the sample (non-entrepreneurs) about 11 percent reported using an informal loan from friends and relatives.

Third, 70 percent of the entrepreneurs in the enterprise sample reported using customer advances or supplier credit to finance their business operations and only 3 percent of the employee (non-entrepreneurs) sample used this form of finance. This channel of finance is very significant

for furniture, metal and tailoring manufacturers (Table 10). Trade credit was a source of financing for 90 percent of the entrepreneurs operating metal workshops, 78 percent of the entrepreneurs operating furniture enterprises and for 68 percent of the entrepreneurs operating tailoring enterprises. Roughly half of the bakeries (50 percent) and about half of the traders (40 percent) received trade credit to finance their operations.

Fourth, a total of 13 percent of the interviewed entrepreneurs have acquired formal finance. Sub-sector differences indicate that formal loans are significant in the case of traders, furniture enterprises and metal workshops. About one third of the traders (32 percent) reported acquiring formal loans to finance working capital for their business during the past year, whereas none of the tailoring workshops received formal loans. A few of the furniture manufacturers (13 percent), a few of the bakers (16 percent) and a few of the metal workshops (12 percent) acquired formal loans to finance their business operations. Furthermore, 53 percent of the employees (non-entrepreneurs) reported using formal loans. About 6 percent of the total sample (both entrepreneurs and non-entrepreneurs) reported using a commercial bank loan over the past 12 months, while about 13 percent of the total sample reported using loans from the CPEC over the past 12 months. Finally, about two percent of the total sample reported using a loan from an NGO over the past 12 months.

Although sub-sector of operation seems to influence the entrepreneurs' use of the alternative financial channels, figures in table 11 indicate that the sources of financing do not seem to vary by size of the enterprise. Finally, over half of the total sample (65 percent of the entrepreneurs and non-entrepreneurs) reported requesting some type of credit from at least one source. The reasons for not requesting loans among those who never demanded a loan from any source included not wanting to be in debt, not possessing enough information about the lending sources or how to apply for loans. Nonetheless, not everyone who requests a loan receives one. Among the total sample, about 20 percent had a loan application rejected at one point in time. Surprisingly, the majority have been rejected by informal lenders, while only a few have been rejected by a commercial bank or the CPECs. The most significant reason reported for a loan application being rejected was a lack of guarantee or insufficient duration of the work relationship with the lender.

a) Differences across Sub-Sectors

Loan terms and conditions of loans vary by source and sub-sector of operation among other determinants. Average loan amounts[7], number of entrepreneurs borrowing from the various sources and their share of the sample are presented in table 12. These figures indicate that over half of the entrepreneurs in each sub-sector borrow from at least one source in the formal or informal sector. The largest loan amounts are by far trade loans from both input suppliers and customer advances taken over the past 12 months. Trade loans, that are quite significant in value for bakers and

[7] The sample average would provide the mean over the total sample; however, given that many individuals did not borrow from a particular source, the average loan amounts are calculated as the mean of the sample of individuals who received loans only.

furniture manufacturers, are granted for very short periods varying between 3 to 6 days on average for most of the entrepreneurs across the five sub-sectors. Unsurprisingly, the average formal sector loans are larger than the average informal loans from family, friends and relatives for bakers, metal workers and carpenters. Formal loans, however, further vary by the type of institution granting the loan. None of the entrepreneurs in the manufacturing sector obtained a formal loan from the CPECs. This is not surprising given that there were only a handful of CPEC members in the manufacturing enterprise sample. The CPEC loans that averaged FCFA 64,000 for entrepreneurs in the trading sector were smaller than the average bank loans obtained by other entrepreneurs in the other manufacturing sectors. However, both CPEC and bank loans were granted for periods varying between 5 and 7 months on average. Finally, very few entrepreneurs obtained loans from NGOs. These loans were, on average, smaller amounts than bank loans but in some cases larger amounts than the CPEC loans.

b) Differences between CPEC Members and Non-Members

In addition to sub-sector differences, the loan amounts vary by the type of lending institution. These differences prevail in both the formal and informal sectors and consequently affect the demand for and use of funds from alternative sources. Table 13 presents average loan amounts, number of entrepreneurs borrowing from each source and their share of the sample for both CPEC members and non-members. It is important to keep in mind that all non-members are entrepreneurs in the manufacturing sector and about half of the members are traders while the other half are salaried employees. Given the important role that trade finance plays in the operations of enterprises, it is not surprising to find that trade loans constitute the largest average loan amounts for both members and non-members. It is interesting to note, however, that among the few CPEC members (5 percent) who borrow from banking institutions the average loan amount is larger than the average bank loan for non-members. Moreover, the CPEC member bank loans are granted for average maturity periods of 9 months, while bank loans used by non-members have an average maturity of 6 months. Nonetheless, the majority of CPEC members (40 percent) borrow an average loan amount that is larger than the average loans they obtain from the informal sector. CPEC non-members receive both a larger average informal loan amount as well as a larger average NGO loan amount than members.

c) Summary

In summary, the sources of finance may be characterized in a ranking order starting with the most to the least utilized. First is retained earnings as the overwhelming source; second is customer advances and supplier credit; third comes informal sources from other enterprises, family and friends; and last is formal finance. This preliminary ranking order falls in line with the pecking order theory of finance that will be tested subsequently.[8] However, sub-sector differences may indicate

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[8] The pecking order theory of finance suggests that "Safety first," i.e. not losing ownership control of the firm, is the principle that is used to rank the firm's preferred sources of financing in priority order (Cuevas, 1992; Donaldson, 1961, 1969; Myers, 1984). It is argued that firms choose to finance investments first from internally generated funds since this represents the safest source of financing. External sources of financing, therefore, are ranked second.

that some sources may play a more significant role for entrepreneurs operating in one sub-sector than for those working in another..

C. Saving Channels

Entrepreneurs in the sample were found to participate in different savings channels. Formal channels consisted of accounts in commercial banks and CPECs. The informal channels are represented by the RoSCAs or tontines and money keepers. Table 10 presents the share of the entrepreneurs saving with formal institutions, tontines and money keepers by sub-sector of operation.

Among the most common savings channels are the formal institutions, banks and CPECs. Roughly one third of the entrepreneurs (38 percent) in the four manufacturing sub-sectors (all but traders) held at least one account with one of the commercial banks or CPECs in Niamey (Table 10). About 27 percent of the tailors, 25 percent of the furniture manufacturers, 25 percent of the bakers and 32 percent of the metal workers held deposits with these institutions. However, the majority of the entrepreneurs engaged in trading activities (92 percent) held accounts with formal institutions. Among the employees (non-entrepreneurs) who are largely CPEC members the majority (88 percent) saved with formal institutions. Roughly one third of the total sample, including entrepreneurs and non-entrepreneurs, held a saving account with a CPEC in Niamey where the deposit amount was FCFA 45,255 on average compared to the average of FCFA 201,832 deposits with commercial banks.

ROSCAs are the second most widely used saving instrument among the entrepreneurs in the sample. About 28 percent of the entrepreneurs reported participating in tontines and about half of the employees (non-entrepreneurs) reported participating in these groups (Table 10). The concentration of tontines is largely among the microenterprises (32 percent, table 11) and in the gender mixed professions of tailoring and trading. Some groups, however, were found among the male dominated professions of metal work and furniture manufacturing. A small number of entrepreneurs (3 percent) among the total sample were found to save with traditional money keepers, particularly those in the furniture and tailoring sub-sectors (8 and 7 percent respectively) who fall in the microenterprise category (5 percent, table 11).

a) Differences across Sub-Sectors

Savings, similar to loans, vary by source and sub-sector of operation among other determinants. Average savings amounts[9], number of entrepreneurs saving with the alternative

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However, when external sources of finance are used, the "Safety first" principle is used again, implying that informal and trade finance are used before riskier bank financing.

[9] The sample average would provide the mean over the total sample; however, given that many individuals did not save with a particular savings channel, the average savings amounts are calculated as the mean of only the sample of individuals who saved with each institution.

channels and their share of the sample are presented in table 12. These figures indicate that about half of the entrepreneurs in each sub-sector save with at least one channel, in the formal or informal sector. The total average savings amounts are highest for furniture manufacturers, bakers and metal workers and smallest for tailors and traders. The largest average amounts of savings in formal institutions are held by far with the banks, even among the traders who are largely CPEC members. The average amount of CPEC deposits for traders are not very large compared to their average bank savings. However, the majority of traders (88 percent) save with CPECs and only very few (8 percent) save with banks. It is interesting to note the large amounts of funds that circulate in the informal groups, tontines. The average annual amounts of funds that entrepreneurs hold in tontines are most significant in the sub-sectors of tailoring and metal work. Finally, informal savings with money keepers do not seem to be significant amounts compared to the funds deposited with the formal institutions or tontines.

b) Differences between CPEC Members and Non-Members

Table 13 provides average savings amounts, number of entrepreneurs using the various saving channels and their share of the sample for both CPEC members and non-members. As noted earlier, it is important to keep in mind that all non-members are entrepreneurs in the manufacturing sector and about half of the members are traders while the other half are salaried employees. While the majority of CPEC members reported holding savings with at least one channel, about less than half of the non-members reported holding savings amounts. However, the average savings for non-members are higher than the average savings for members. Unsurprisingly, the majority of CPEC members (88 percent) save with the CPECs while only a few (7 percent) save with the banks. The average savings amount CPEC members hold in banks is higher than the average savings amounts reported with the CPECs. About half of the CPEC members, moreover, participate in tontines with an average amount of holdings larger than their CPEC and bank savings. Finally, large amounts of tontine average holdings are reported for non-members similar to CPEC members.

c) Summary

In summary, the array of saving channels and the different concentrations of entrepreneurs by sub-sector among these channels indicates very important findings. Monetary savings are very important to entrepreneurs. Almost every entrepreneur has used at least one savings channel to keep her/his deposits as a means to manage liquidity of the enterprise. Moreover, entrepreneurs draw upon formal channels, commercial banks and CPECs, as well as on informal channels, such as tontines, to deposit their savings.

III. CAPITAL STRUCTURE DETERMINANTS AMONG MANUFACTURING ENTERPRISES IN NIGER

Despite the numerous projects and policies initiated to assist micro, small and medium scale enterprises over the past decade, there is a lack of understanding about the entrepreneur's effective demand for alternative financial services under the circumstances found in many developing

countries. Most of the literature that describes the sources of finance for micro, small and medium scale enterprises in low income countries across various sub-sectors is based on a descriptive rather than a diagnostic framework (e.g. Cortes et al., 1987; Levy, 1993; McLeod, 1991; Kilby et al., 1984). Descriptive studies often provide reports of field surveys of various sub-sectors in developing countries. The identification of finance as the primary obstacle to develop small scale enterprises in some of these studies, however, is highly rhetorical when based on the entrepreneurs' subjective responses (e.g. Levy). Entrepreneurs when asked about their access to formal finance typically respond by claiming a need for credit at reasonable prices. These subjective questions are rarely specific to show how the entrepreneur would respond to a rigorous subset of loan terms and conditions. Under increasing rigorous terms and conditions the demand for credit would decline.

A critical problem in the assessment of small enterprise sector studies is that they consider formal financial contracts that entrepreneurs use as being exogenously predetermined, and not a function of the overall mix of financial services entrepreneurs choose to use and the particular sub-sectors within which they operate. An entrepreneur's use of alternative financial services is determined by a number of factors. These include characteristics of the enterprise, attributes of the entrepreneur, rates of return, interest rates, transaction costs of alternative sources of financing, and the respective shares of these financial assets and liabilities in total expenditures over the production period (Baydas, 1994). Size of the enterprise influences the financial behavior of the entrepreneur since larger scale affects the costs and bargaining power of accessing external financial services. Sector of operation directly impacts the physical asset composition and volatility of earnings which influence the financial structure. Furthermore, investments in physical capital, i.e. tangible assets, allow a firm to provide collateral and in turn access debt financing easier. Finally, among the characteristics of the enterprise and its external relationships, the nature of the input and output linkages found among the various economic agents--producers, traders and consumers--also affect the financial contracts that are available to an entrepreneur.

A set of entrepreneurial characteristics influence the financial behavior of the entrepreneur managing the firm. These include education level and the degree to which the entrepreneur is informed, age and risk taking attitude. Entrepreneurs who are better informed and have completed higher levels of education are likely to use more debt finance than their less informed counterparts. Older entrepreneurs, however, are likely to be more risk averse and less interested in using external finance. The entrepreneur's attitude towards risk suggests that risk averse entrepreneurs use less debt finance than risk taking entrepreneurs.

This section analyzes the differences found across sub-sectors in the sources of finance used by manufacturing enterprises in Niger. An examination of the entrepreneur's choice among various sources of financing will shed light on how financial contracts influence firm behavior across sub-sectors. This analysis utilizes the sub-sector approach to demonstrate how input purchases, output sale contracts, retained earnings, informal sources and formal finance simultaneously determine the financial structure of the firm. The section presents an empirical model which addresses the sources

of financing of micro and small scale manufacturing enterprise in developing economies and presents empirical implications based on the survey of five sub-sectors in Niamey[10].

1. Econometric Methods and Analysis

The objective of this empirical model is to examine the financial structure of the firm using the structural system of simultaneous equations which accounts for the endogeniety of financial contracts in different sub-sectors. The allocations of financial assets and liabilities used to finance the firm's operating costs for a given period are jointly determined in a structural system of simultaneous equations (eqs. 1-5). The empirical model that is derived from the general structural simultaneous equations system can be written as:

$$(\frac{C}{T}) = \beta_{10} + \beta_{11}(t_C) + \beta_{12}(r_C) + \beta_{13}(i_{IL}) + \beta_{14}(t_{IL}) + \beta_{15}(\frac{IL}{T}) + \beta_{16}(Y_K) \quad (1)$$

$$(\frac{IL}{T}) = \beta_{20} + \beta_{21}(t_{IL}) + \beta_{22}(i_{IL}) + \beta_{23}(r_{IH}) + \beta_{24}(t_{IH}) + \beta_{25}(\frac{IH}{T}) + \beta_{26}(Y_K) \quad (2)$$

$$(\frac{IH}{T}) = \beta_{30} + \beta_{31}(t_{IH}) + \beta_{32}(r_{IH}) + \beta_{33}(i_{TL}) + \beta_{34}(t_{TL}) + \beta_{35}(\frac{TL}{T}) + \beta_{36}(Y_K \quad (3)$$

$$(\frac{TL}{T}) = \beta_{40} + \beta_{41}(t_{TL}) + \beta_{42}(i_{TL}) + \beta_{43}(r_D) + \beta_{44}(t_D) + \beta_{45}(\frac{D}{T}) + \beta_{46}(Y_K) \quad (4)$$

$$(\frac{D}{T}) = \beta_{50} + \beta_{51}(t_D) + \beta_{52}(r_D) + \beta_{53}(i_{FL}) + \beta_{54}(t_{FL}) + \beta_{55}(\frac{FL}{T}) + \beta_{56}(Y_K) \quad (5)$$

The array of different financing sources that an entrepreneur may use to fund total expenditures over inputs represents some zero and non-zero amounts for the variables (C/T, IL/T,

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[10] For further discussion of the theoretical model and econometric techniques and analysis see Baydas, 1993.

IH/T, TL/T, D/T, FL/T) on the left hand side (LHS) of the equations in the model. The sequential two-stage estimation technique used in the study involves, first, estimating the reduced form equations using the standard tobit model for equations with limited LHS variables or least squares for unconstrained LHS variables, as appropriate for each reduced form equation (Table 15). Second, we obtain the predicted values of the endogenous variables from step 1, and insert the predictors for the endogenous variables on the RHS of the equations in the structural model. Third, we estimate the structural equations using the tobit maximum likelihood technique or least squares to generate the results of the model presented in table 16. This methodology is similar to that used in Nelson and Olson's model (1978), reviewed by Amemiya (1984) under a type 4 tobit model, which generates consistent and asymptotically normal estimates.

2. Results and Discussion

The results presented in this section were estimated using the econometric techniques described in the previous section[11]. The model is estimated using the linear-log functional form. The literature does not provide any implications as to which functional form is more appropriate; however, having a set of variables derived from the marginal productivity of physical capital among the explanatory variables suggests that the linear-log form may describe the true functional form better than the linear form.[12]

The findings of this model imply, first, that larger asset holdings are negatively associated with informal holdings.[13] This result is expected since larger investments in physical capital are associated with carrying smaller amounts of informal holdings. The long-term effects as indicated from the reduced form equations, however, imply that a larger value of physical assets which is a proxy for collateral is associated with increases in informal loans as a proportion of total expenditure. Although informal lenders often use collateral substitutes to screen borrowers and resolve part of the asymmetric information problems, the results indicate that value of the physical assets is important. Larger amounts of trade loans, formal deposits and formal loans are associated with increases in profitability. This implies that entrepreneurs engaged in more profitable activities hold larger amounts of savings, since they are able to generate more earnings, and acquire larger amounts of trade credit and formal finance from banks and CPECs.

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[11] The estimation of the model involved all 191 entrepreneurs and salaried employees in the sample to gain more information on the financial transactions of all individuals. Therefore, in interpreting the results of the model, the term entrepreneur is used to refer to all individuals in the sample.

[12] The production function is a general power function which is estimated more efficiently using the log functional form.

[13] Informal holdings are savings kept with money keepers and participation in rotating savings and credit associations.

Larger enterprises, as proxied by the number of their employees, are associated with using smaller amounts of cash over the long-run as indicated from the reduced form equations and in the structural equations estimation. This is surprising because the results imply that the long-term effect for large enterprises is to use less cash financing which is contrast to the pecking order theory that suggests that entrepreneurs use internal sources of finance before risky ones. Moreover, the longer enterprises have been in operation as indicated by the number of years they have been in the business, the less informal finance they are likely to use in the long-run as a proportion of their total expenditure. Again, this result implies that businesses tend to use less informal debt financing as the age of the business increases.

Sub-sector differences indicate that entrepreneurs operating metal and furniture workshops and bakeries draw upon trade finance to a larger extent than entrepreneurs operating in the other sub-sectors as indicated in both the reduced form equations and the second stage. This finding may be explained by the large amounts of customer advances flowing to furniture workshops and trade credit offered to carpenters versus the more limited amounts of customer advances or supplier credit used by tailors and traders. Consistent with this result is the negative association between the use of cash and the entrepreneurs operating furniture workshops. However, entrepreneurs operating metal workshops use more informal loans as a proportion of total expenditure compared to entrepreneurs operating in the other sub-sectors.

Among the characteristics reflecting entrepreneurial abilities, age and education of the entrepreneurs the results indicate that older and better educated entrepreneurs have more formal deposits than younger and less educated entrepreneurs. These findings imply that older and more educated entrepreneurs use safer sources of financial assets such as internal finance as suggested in the pecking order theory. Moreover, age and education coefficients indicate that older and better educated entrepreneurs use more formal loans as a proportion of total expenditure, in the long-run, than younger and less educated entrepreneurs. This result implies that older and better educated entrepreneurs are better informed and more able to access external finance. However, this finding is in contrast with the pecking order theory which suggests that entrepreneurs choose safer sources of finance first rather than external sources. Gender of the entrepreneur indicates that female entrepreneurs have larger amounts of informal holdings with tontines than male entrepreneurs, while male entrepreneurs use more informal and formal loans. Among the external sources of liabilities, women use more trade loans, which is relatively a safer source of finance than formal loans, than men. These results indicate a more risk-taking behavior for men and more risk averse behavior among women. Finally, participation in CPECs implies that CPEC members use less informal holdings in tontines and more formal deposits as a proportion of total expenditure than non-members. This is a very important result since it implies that participation in CPECs offers more diverse channels for holding savings, in particular encouraging intermediation in the formal sector through the local credit union movement, and competes with informal savings and credit groups such as tontines.

The rates of return on formal deposits are positively associated with higher holdings of these financial assets. However, the interest rates on financial liabilities, i.e. informal and formal loans,

are positive, contrary to expectation, but of a small magnitude. This is because the simultaneous equation system accounts for the entrepreneurs' and individuals' use of the respective financial assets and liabilities and thus, accounts for higher rates of return and interest rates associated with the use of these services. Transaction costs are generally positively associated with the respective amounts of financial assets and liabilities; however, the magnitude of these effects is relatively small.

Finally, there are two significant relationships among the financial assets and liabilities. First, increases in formal deposits are negatively associated with increases in trade loans and, second, increases in deposit holdings are positively associated with increases in formal loans. The first relationship indicates that entrepreneurs may substitute the use of external sources of financing with safe sources of internal finance. This relationship is in agreement with the pecking order theory which suggests the use of internal sources of financing or safe sources of external finance rather than drawing on risky sources of external finance. Second, the relationship between formal deposits and formal loans implies that entrepreneurs would draw more on both internal sources of finance; i.e. deposits, and on risky sources of external finance; i.e. formal loans. This inverse relationship is also in agreement with the credit rationing theory which implies that savings are used as a screening tool to ration good borrowers from bad ones and to provide a guaranty against moral hazard behavior. This result is not surprising, given that the use of deposits as a guaranty mechanism is practiced by the CPECs in Niger.

IV. SUMMARY, LESSONS AND IMPLICATIONS

1. Summary of Enterprise Survey Study

This paper reported on the enterprise sector in Niamey, the capital of Niger. The main focus of our analysis was to examine the financial services that entrepreneurs and CPEC members draw upon to finance their enterprises and activities. In addition to the services offered by formal financial institutions, i.e. banks, CPECs and NGOs, entrepreneurs draw upon a complex set of informal contracts with various economic agents. These contracts are used for both savings and loan purposes. The primary purpose of this research was to analyze the entrepreneurs' choice of the sources of funding new investments and operations of the firm and to examine the determinants of the capital structure of micro and small scale enterprises (SMEs) in the enterprise sector in Niamey.

To examine the alternative financial networks in the manufacturing enterprise sector in Niamey a survey of 131 micro and small scale manufacturing enterprises was carried out in April and May of 1995. In addition, the survey randomly selected 60 members from three CPECs in Niamey to examine their entrepreneurial activities and financial transactions. Roughly, half of the CPEC members engaged in trading activities and the other half were primarily employees. The manufacturing sub-sectors consisted of tailoring manufacturers, furniture and wood processing enterprises, metal workshops and food processing bakeries. Over 40 enterprises were surveyed in each of the tailoring, furniture and metal work, along with 12 bakeries and 25 traders. The enterprise survey was composed of 159 enterprises in four manufacturing sub-sectors and the trading sector.

The surveyed enterprises were selected in Niamey because it is the only region in the country in which one finds a large and diverse number of manufacturing enterprises across various sub-sectors and size categories that could provide information about the issues in question.

The sources of funding and the savings channels entrepreneurs draw upon are various. They fall into informal and formal networks. The informal channels that prevail in Niger include family, friends, suppliers credit, customer advances, tontines (Rotating Credit and Savings Associations, or RoSCAs), and money keepers. Although the formal financial sector is expanding in Niger through the expansion of the CPEC movement, formal channels reported used by the entrepreneurs include only two commercial banks, the CPECs and a few NGOs. The sources of funding in the enterprise sector in Niamey were principally retained earnings, trade finance, informal loans, informal holdings, formal deposits and formal loans.

Sources of finance for current operations include both informal and formal channels, although they are concentrated on informal agents. First, most of the entrepreneurs (96 percent) operating in the enterprise sector reported that they use retained earnings as a source of financing their current operations. Moreover, the majority of the entrepreneurs (73 percent) relied on savings from retained earning to finance recent investments in the business. Second, about 18 percent of the entrepreneurs in the five sub-sectors reported that they draw upon informal sources of finance from other enterprises, or family and friends in their current operations. Third, 70 percent of the entrepreneurs reported using customer advances and supplier credit to finance their business operations. This channel of finance is very significant for furniture and metal workshops. Fourth, and last, only 13 percent of the interviewed entrepreneurs have acquired formal finance from a commercial bank or a CPEC for the purpose of operating their businesses.

Entrepreneurs in the sample were found to participate in different savings channels. Formal channels consisted of accounts in commercial banks and the CPECs. The informal channels are represented by tontines and money keepers. Among the most common savings channels are the commercial banks and CPECs. Roughly more than one third of the entrepreneurs held at least one account with a formal financial institution in Niamey. Tontines are the second most widely used saving channel among the entrepreneurs in the sample. About 28 percent of the entrepreneurs reported participating in tontines. The concentration of tontines is largely among the microenterprises in the female dominated professions of trading and the mixed gender profession of tailoring. Some groups, however, were found among the male dominated professions of metal and furniture manufacturing. Savings with money keepers are not widely practiced in Niamey.

Entrepreneurs' financial patterns differ somewhat from salaried employees or non-entrepreneurs financial behavior, as expected. The majority of salaried employees (88 percent) hold formal deposit facilities with CPECs and a few hold accounts with the banks. Nonetheless, half of the non-entrepreneurs in the sample (53 percent) also participated in tontines or informal holdings. Moreover, salaried employees (53 percent) borrow from formal institutions, largely the CPECs, a few from commercial banks, and to a limited extent (9 percent) from informal sources, such as family and friends.

In summary, the sources of finance may be characterized in a ranking order starting with the most to the least utilized. First, is retained earnings as the overwhelming source; second are customer advances and supplier credit; third is informal sources from other enterprises, family and friends; and last is formal finance. This preliminary rank order falls in line with the pecking order theory of finance that was tested previously. However, sub-sector differences may indicate that some sources play a more significant role for entrepreneurs operating in one sub-sector than for those working in another. Moreover, the array of saving channels and the different concentrations of entrepreneurs by sub-sector among these channels indicates very important findings. Monetary savings are very important to entrepreneurs. Almost every entrepreneur has used at least one savings channel to keep her/his deposits as a means to manage liquidity of the enterprise. Moreover, entrepreneurs draw upon formal channels, CPECs and commercial banks, as well as on informal channels, such as tontines, to deposit their savings.

The differences found across sub-sectors in the sources of finance used by enterprises in Niger were further tested. An examination of the entrepreneur's choice among various sources of financing shed light on how financial contracts influence firm behavior across sub-sectors. This analysis utilized the sub-sector approach to demonstrate how input purchases, output sale contracts, retained earnings, informal sources and formal finance simultaneously determine the financial structure of the firm. A theoretical model which addresses the sources of financing of micro and small scale enterprises in developing economies was tested and empirical implications presented based on the survey of the enterprise sector in Niamey.

2. Lessons and Implications

A. Lessons

The results of the model in the enterprise sector in Niamey provide several lessons and insights about the importance of the various financial services entrepreneurs draw upon in financing their operations. First, cash or retained earnings are used less by smaller enterprises and those operating in the furniture sub-sector. Second, informal loans are larger for enterprises with a larger value of physical assets, those which have been in operation for a short period of time, entrepreneurs operating metal workshops and male entrepreneurs. Third, increases in informal holdings are associated with a decreased value in physical capital, female entrepreneurs and non-members of CPECs. Fourth, increases in trade loans are associated with more profitable enterprises, those operating in the metal, furniture and bakeries sub-sectors, and for female entrepreneurs. Fifth, increases in deposit holdings are associated with increases in profitability of the business, older and more educated entrepreneurs, and for CPEC members. And finally, sixth, the long-term effects of using formal debt financing indicate that formal loans increase with an increased profitability, education and age of the entrepreneur and for male entrepreneurs.

B. Policy Implications

Despite numerous projects and policies initiated to assist micro and small scale enterprises in low income countries, little is known about the impact of these efforts on enterprise operations and evolution in these countries. The persistent question that has been often debated is to what extent do financial services and credit programs assist the operations of SMEs? The supply leading approach to the development of SMEs has recorded many more failures than successes, which in turn has led to many unfortunate consequences.

The analysis of the capital structure of these enterprises undertaken in this study has yielded some new insight into the significance of the different sources of finance in the operations of SMEs. Based on a better understanding of the changing cross-sectional profile of the capital structure of SMEs, the nature of the appropriate support schemes will be discussed next. Recommendations regarding future policies will be addressed from the empirical implications presented earlier in this research work.

It is clear that several informal and formal financial channels exist for entrepreneurs to draw upon to finance their businesses and to diversify their portfolios. The strength or success of any of these financial channels in mobilizing funds and intermediating between surplus and deficit units should be carefully examined at both the macro and micro levels before attempting to intervene in these markets.

First at the macro level, trade liberalization policies, on the one hand, have a positive impact on increasing the competition among importers and traders. Consequently, increased competition among wholesalers and retailers of raw materials supplying many entrepreneurs operating micro and small scale enterprises presents incentives for these suppliers to engage in offering trade loans as a marketing facility to encourage the sale of their commodities. On the other hand, down-stream trade liberalization encourages exports which open new channels for sale in new expanded markets. This avenue, however, seems remote from the Nigerien environment where manufacturing enterprises offer a limited array of custom-made products for the local market.

Second, schemes seeking to provide only loan services to the enterprise sector will face tremendous imperfect information problems that are exacerbated by the risk arising from unpredictable changes over time. The results of this research highlight the importance of trade finance in the capital structure of enterprises. Trade finance flows from the various local retailers, middlemen traders, wholesalers and importers. The CPECs should attempt to attract these agents into their pool of members to enhance the flow of information and financial services along the vertical linkages in the trading channels. Moreover, the CPEC saving services provide information on their borrowers and collateral that resolve part of the asymmetric information problems lenders face in developing countries.

Finally, and third, it is evident that savings, whether informal or formal, is a major component of the entrepreneurs' portfolios. The CPEC movement should attempt to penetrate the enterprise sector and plan to establish more local branches in Niamey, that would mobilize the entrepreneurs' funds. Through deposit mobilization, better information can be collected about the

entrepreneurs' savings behavior and the CPECs would be able to intermediate between the deficit and surplus enterprise units. A very encouraging finding is that the CPEC savings facilities seem to be competing with the popular informal groups, tontines. A wider variety of savings instruments, such as several terms of fixed deposits, should be made available through the CPECs. The majority of the CPEC members are currently saving with the CPECs and only a few CPEC members also hold saving accounts with the commercial banks in Niamey. This is another encouraging finding given that large amounts of deposits are held with commercial banks among the non-members, thus suggesting that micro and small scale enterprises demand saving services from formal financial institutions. Most of the non-members were not aware of the existence of the CPEC movement in Niamey. Therefore, a large promotional campaign should be initiated to assist in educating entrepreneurs about the CPECs.

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Table 1. Economic and Business Characteristics of CPEC-Members and Sample Firms in the Niamey Survey.

	Number	Percent
Salaried Employees	32	17%
Entrepreneurs	159	83%
Total	191	100%
Sectors of Activity		
Textiles and Tailoring Workshops	41	26%
Furniture and Processed Woodwork	40	25%
Metal Workshops	41	26%
Bakeries	12	7%
Traders	25	16%
Total	159	100%
Size of Enterprises		
Micro (<5 empl.)	99	62%
Small (5-29 empl.)	58	37%
Medium (30-100 empl.)	2	1%
Life Cycle Stage		
First (1-2 years)	12	7%
Second (3-5 years)	27	17%
Third (6-10 years)	41	26%
Fourth (11-20 years)	60	38%
Fifth (21 plus years)	19	12%
Establishment Profile	Range	Average
Average Number of Years in Operation	1 - 42	12 years
Average Number of Start-up Employees	0 - 30	3
Average Number of Current Employees	0 -33	5
Average Number of Apprentices	0 -8	1
Average Number of Full-Time Employees	0 -28	2
Average Number of Male Employees	0 -31	4
Average Number of Female Employees	0 -7	0.15
Average Size of Physical Assets	0 -104,700 [a]	2,488[a]

Source: The Ohio State University (OSU) Niamey Survey, 1995.
Note a: 1000s of FCFAs.

Table 2. Selected Characteristics of CPEC Members and Non-Members in The Niamey Survey.

	CPEC Members	Non-Members	Total Sample
Gender			
Male	(20) 33%	(124) 95%	(144) 75%
Female	(40) 67%	(7) 5%	(47) 25%
Marital Status			
Married	(43) 72%	(88) 67%	(131) 69%
Single/Divorced	(17) 28%	(43) 33%	(60) 31%
Education Level			
High School Graduate or Above	(16) 27%	(10) 8%	(26) 16%
Secondary Education	(12) 20%	(36) 27%	(48) 25%
Basic Education	(15) 25%	(33) 25%	(48) 25%
Illiterate	(17) 28%	(52) 40%	(69) 36%
Other Private Business	(15) 25%	(21) 16%	(36) 19%
Household Head	(33) 55%	(102) 78%	(135) 71%
Average Age	39 years	37 years	37 years
Average Household Size	7 members	6 members	7 members

Source: OSU Niamey Survey, 1995.

Table 3. Selected Characteristics of Enterprises by Size.

	Micro Enterprises	Small Enterprises
Establishment Profile		
Average Number of Years in Operation	12 years	12 years
Average Number of Start-up Employees	1	7
Average Number of Current Employees	1	9
Average Size of Physical Assets	265[a]	5,558[a]
Secondary Occupation	20 (20%)	10 (17%)
CPEC Member	27 (27%)	1 (2%)
Sub-Sector of Operation		
Textile & Tailoring	28 (28%)	13 (22%)
Furniture Workshops	24 (24%)	16 (28%)
Metal Workshops	21 (21%)	20 (34%)
Bakeries[b]	1 (1%)	9 (15%)
Traders	25 (25%)	0 (0%)
Total	99(100%)	58 (100%)
Gender Composition		
Male Entrepreneurs	76 (77%)	55 (95%)
Female Entrepreneurs	23 (23%)	3 (5%)

Source: OSU Enterprise Survey, 1995
Note a: 1000s of FCFAs.
Note b: The survey includes only two medium scale bakeries.

Table 4. Selected Characteristics of Enterprises by Gender.

	Male Entrepreneurs[a]	Female Entrepreneurs[b]
Establishment Profile		
Average Number of Years in Operation	13 years	10 years
Average Number of Start-up Employees	4	1
Average Number of Current Employees	5	1
Average Size of Physical Assets	2,937[c]	194[c]
Size of Business		
Microenterprise	76 (57%)	23 (88%)
Small Scale Enterprise	55 (41%)	3 (11%)
Medium Scale Enterprise	2 (1%)	0 (0%)
Total	133 (100%)	26 (100%)
Secondary Occupation	22 (16%)	9 (35%)
CPEC Member	9 (7%)	19 (73%)
Average Number of Years of Education	5 Years	5 Years
Average Age	37 Years	39 Years
Average Household Size	6 Members	7 Members
Household Head	106 (80%)	13 (50%)

Source: OSU Enterprise Survey, 1995.
Note a: Percentage of male entrepreneurs.
Note b: Percentage of female entrepreneurs.
Note c: 1000s of FCFAs.

Table 5. Selected Characteristics of Enterprises by Sector of Operation.

	Textile & Tailoring	Furniture Workshops	Metal Work	Bakeries	Traders
Establishment Profile					
Avg. Number of Years in Operation	11 years	12 years	13 years	13 years	11 years
Avg. Number of Start-up Employees	2	3	4	4	0
Avg. Number of Current Employees	3	5	5	5	0
Avg. Growth Rate	6%	16%	12%	15%	0%
Avg. Size of Physical Assets	289[a]	437[a]	918[a]	27,221[a]	78[a]
CPEC Members	2 (5%)	1 (2%)	1 (2%)	0 (0%)	24 (96%)
CPEC Non-Members	39 (95%)	39 (98%)	40 (98%)	12 (100%)	1 (4%)
Microenterprises	28 (68%)	24 (60%)	21 (51%)	1 (8%)	25 (100%)
Small Scale Enterprises	13 (32%)	16 (40%)	20 (49%)	9 (75%)	0 (0%)
Medium Enterprises	0 (0%)	0 (0%)	0 (0%)	2 (17%)	0 (0%)
Gender Composition					
Male Entrepreneurs	33 (80%)	40 (100%)	41 (100%)	12 (100%)	7 (28%)
Female Entrepreneurs	8 (19%)	0 (0%)	0 (0%)	0 (0%)	18 (72%)

Source: OSU Enterprise Survey, 1995.
Note a: 1000s of FCFAs.

Table 6. Number of Enterprises by Years of Operation of Enterprises and Sector of Operation.

Years of Operation	Textile & Tailoring	Furniture Workshops	Metal Work	Bakeries	Traders
1-2 years	1 (2%)	4 (10%)	1 (2%)	3 (25%)	3 (12%)
3-5 years	10 (24%)	7 (17%)	5 (12%)	2 (17%)	3 (12%)
6-10 years	14 (34%)	10 (25%)	10 (24%)	1 (8%)	6 (24%)
11-20 years	12 (29%)	12 (30%)	20 (49%)	5 (42%)	11 (44%)
21 plus years	4 (10%)	7 (17%)	5 (12%)	1 (8%)	2 (8%)
Total	41(100%)	40(100%)	41(100%)	12(100%)	25(100%)

Source: OSU Enterprise Survey, 1995.

Table 7. Selected Characteristics of Enterprises by Stage of Operation.

	1-2 Years	3-5 Years	6-10 Years	11-20 Years	21+ Years
Establishment Profile					
Number of Enterprises	12	27	41	60	19
Avg. Number of Years in Operation	1.5 years	4 years	8 years	16 years	28 years
Avg. Number of Start-up Employees	5	3	3	4	4
Avg. Number of Current Employees	8	3	4	5	5
Avg. Size of Physical Assets	1,872[a]	1,675[a]	645[a]	4,158[a]	2,728[a]
Secondary Occupation					
CPEC Members	3 (25%)	5 (18%)	7 (17%)	12 (20%)	1 (5%)
CPEC Non-Members	9 (75%)	22 (82%)	34 (83%)	48 (80%)	18 (95%)
Total	12 (100%)	27 (100%)	41 (100%)	60 (100%)	19 (100%)
Microenterprises	6 (50%)	18 (67%)	26 (63%)	37 (61%)	12 (63%)
Small Scale Enterprises	5 (42%)	9 (33%)	15 (37%)	22 (37%)	7 (37%)
Medium Enterprises	1 (8%)	0 (0%)	0 (0%)	1 (2%)	0 (0%)
Gender Composition					
Male Entrepreneurs	9 (75%)	20 (74%)	35 (85%)	51 (85%)	18 (95%)
Female Entrepreneurs	3 (25%)	7 (26%)	6 (15%)	9 (15%)	1 (5%)

Source: OSU Enterprise Survey, 1995.

Table 8. Selected Indicators of the Relations between Entrepreneurs and Suppliers by Sector of Operation.

	Bakeries	Furniture Workshops	Metal Workshops	Tailoring Workshops	Traders
Contractual Relations with Suppliers					
Local Trader	83%	77%	86%	75%	92%
Local Manufacturer	0%	7%	8%	25%	8%
Cooperative	0%	0%	2%	0%	0%
Importer	8%	10%	2%	0%	0%
NGO	8%	5%	2%	0%	0%
Purchase from Sole Supplier	50%	50%	60%	41%	8%
Ave. Duration of Relation with Supplier (months)	58 months	36 months	44 months	26 months	9 months
Form of Payment					
Cash	100%	92%	92%	95%	96%
Supplier Credit	8%	10%	26%	2%	4%
Advance Payment	8%	5%	3%	2%	0%

Source: OSU Enterprise Survey, 1995.

Table 9. Selected Indicators of the Relations between Entrepreneurs and Customers by Sector of Operation.

	Bakeries	Furniture Workshops	Metal Workshops	Tailoring Workshops	Traders
Contractual Relations with Customers					
Local Consumers	83%	87%	87%	88%	80%
Local Retailer in Same Market	17%	10%	13%	10%	8%
Local Retailer in Other Markets	0%	3%	0%	2%	12%
Regular Customers	75%	35%	27%	54%	40%
Ave. Duration of Relation with Customers (months)	50 months	24 months	23 months	28 months	27 months
Form of Purchase					
Cash	8%	45%	42%	56%	72%
Credit	75%	10%	7%	7%	16%
Advance Payment	17%	45%	51%	37%	12%

Source: OSU Enterprise Survey, 1995.

Table 10. Current Funding Sources and Savings Channels Reported in the Enterprise Survey by Sector of Operation.

	Bakeries	Furniture Workshops	Metal Workshops	Tailoring Workshops	Traders	Total Entrepreneur Sample	Employees/ Non-Entrepreneurs
Sources of Funds for Investments							
Investment from Savings	83%	75%	71%	80%	56%	73%	28%
Informal Loan	8%	5%	10%	2%	8%	7%	6%
Formal Loan	8%	5%	7%	0%	16%	6%	0%
Sources of Funds for Current Operations							
Entrepreneurs Using Retained Earnings	100%	93%	93%	100%	96%	96%	100%
Entrepreneurs Using Informal Loans	16%	20%	39%	7%	12%	18%	9%
Entrepreneurs Using Trade Credit (Supplier/Customer)	50%	78%	90%	68%	40%	70%	3%
Entrepreneurs Using Formal Loans	17%	13%	12%	0%	32%	13%	53%
Savings Channels							
Entrepreneurs Saving with Formal Institutions	25%	25%	32%	27%	92%	38%	88%
Entrepreneurs Participating in Informal Groups (Tontine)	0%	12%	29%	29%	66%	28%	53%
Entrepreneurs Saving with Money-Keepers	0%	8%	0%	7%	0%	3%	0%

Source: OSU Enterprise Survey, 1995.

Table 11. Current Funding Sources and Savings Channels Reported in the Enterprise Survey by Size.

	Micro-Enterprises	Small-Scale Enterprises	Total
Sources of Funds for Investments			
Personal Investment from Savings	73%	72%	73%
Informal Loan	5%	8%	7%
Formal Loan	5%	9%	6%
Sources of Funds for Current Operations			
Entrepreneurs Using Retained Earnings	78%	72%	76%
Entrepreneurs Using Informal Loans	20%	21%	18%
Entrepreneurs Using Trade Credit (Supplier/Customer)	68%	78%	70%
Entrepreneurs Using Formal Loans	10%	17%	13%
Savings Channels			
Entrepreneurs Saving with Formal Institutions	36%	41%	38%
Entrepreneurs Participating in Informal Groups (Tontine)	32%	22%	28%
Entrepreneurs Saving with Money-Keepers	5%	0%	3%

Source: OSU Enterprise Survey, 1995.

Table 12. Entrepreneurs Using Savings and Loans by Source and Sector of Operation

	Bakeries (N=12)			Furniture Workshops (N=40)			Metal Workshops (N=41)			Tailoring Workshops (N=41)			Traders (N=25)		
Entrepreneurs Using:	No.	% [e]	Average [c]	No.	% [e]	Average [c]	No.	% [e]	Average [c]	No.	% [e]	Average [c]	No.	% [e]	Average [c]
Loans [a]	6	(50%)	2,940,745 [d]	33	(83%)	21,249,278	38	(93%)	15,498,000	28	(68%)	13,208,217	15	(60%)	3,137,933
Informal Ls	2	(17%)	2,550,000	8	(20%)	66,125	16	(39%)	107,812	3	(7%)	64,998	3	(12%)	69,166
Trade Ls	6	(50%)	2,937,946 [d]	31	(78%)	22,348,296	37	(90%)	15,777,955	28	(68%)	13,201,253	10	(40%)	4,632,450
Formal Ls	2	(17%)	5,850,000	5	(12%)	1,580,000	5	(12%)	682,994	0	0	0	8	(32%)	67,125
Bank Ls	1	(8%)	8,000,000	5	(13%)	1,580,000	3	(7%)	933,337	0	0	0	0	0	0
CPEC Ls	0	0	0	0	0	0	0	0	0	0	0	0	8	(32%)	64,000
NGO Ls	1	(8%)	3,700,000	0	0	0	2	(5%)	307,500	0	0	0	1	(4%)	25,000
Savings [b]	3	(25%)	2,843,332	16	(40%)	3,949,650	17	(42%)	2,535,469	20	(49%)	867,876	22	(88%)	395,863
Bank Ss	3	(25%)	2,843,332	6	(15%)	10,313,733	5	(12%)	2,170,999	2	(5%)	1,263,497	2	(8%)	1,400,000
CPEC Ss	0	0	0	2	(5%)	2,500	1	(2%)	10,000	2	(5%)	52,992	22	(88%)	24,582
NGO Ss	0	0	0	0			1	(2%)	20,000	1	(2%)	500	1	(4%)	21,000
Tontine Ss	0	0	0	5	(12%)	242,800	12	(29%)	2,662,584	12	(29%)	1,188,166	14	(66%)	380,514
Money-keeper Ss	0	0	0	3	(8%)	31,000	3	(7%)	88,997	6	(15%)	77,660	1	(4%)	20,000

Source: OSU Enterprise Survey, 1995.

Note a: Loans comprise all informal, trade and formal sector credit obtained over the past 12 months. Moreover, Formal sector loans are comprised of banks, CPECs and NGO loans.

Note b: Savings comprise all funds with banks, CPECs, NGOs, funds mobilized by tontines and money keepers over the past 12 months.

Note c: The sample average would provide the mean over the total sample; however, given that many individuals did not borrow from a particular source or save with a particular savings channel, the average savings and loan amounts are calculated as the mean of the sample of individuals who saved with the institution or received loans only.

Note d: 1000s of FCFAs.

Note e: Percentage calculated as a share of the number of entrepreneurs using the financial channel from the total number of entrepreneurs in each sub-sector.

Table 13. CPEC Members and Non-Members Use of Savings and Loans by Source

	CPEC Members (N=60)				Non-CPEC Members (N=131)			
	No.	% [e]	Average [c]	Share of Portfolio [d]	No.	% [e]	Average [c]	Share of Portfolio [d]
Loans [a]	37	(62%)	3,318,446	100%	102	(78%)	188,628,876	100%
Informal Loans	6	(10%)	43,670	0.26%	29	(22%)	260,310	0.04%
Trade Loans	14	(23%)	7,923,998	90.35%	99	(76%)	194,036,176	99.84%
Formal Loans	25	(42%)	463,380	9.43%	12	(9%)	1,917,916	0.11%
Bank Loans	3	(5%)	2,800,000	72.51%	9	(7%)	2,077,776	81.25%
CPEC Loans	24	(40%)	117,895	24.42%	0	(0%)	0	0%
NGO Loans	2	(3%)	262,500	4.53%	3	(2%)	1,438,336	18.74%
Savings [b]	56	(93%)	1,134,536	100%	53	(40%)	2,471,471	100%
Bank Savings	4	(7%)	853,005	5.37%	16	(22%)	5,169,653	63.15%
CPEC Savings	53	(88%)	163,015	13.59%	0	(0%)	0	0%
NGO Savings	2	(3%)	90,510	0.28%	2	(1.5%)	10,250	0.12%
Tontine Savings	31	(52%)	1,642,943	80.16%	29	(22%)	1,635,277	36.20%
Money-keepers	3	(5%)	123,340	0.58%	12	(9%)	68,829	0.63%

Source: OSU Enterprise Survey, 1995.

Note a: Loans comprise all informal, trade and formal sector credit. Moreover, Formal sector loans are comprised of banks, CPECs and NGO loans.

Note b: Savings comprise all funds with banks, CPECs, NGOs, funds mobilized by tontines and money keepers over the past 12 months.

Note c: The sample average would provide the mean over the total sample; however, given that many individuals did not borrow from a particular source or save with a particular savings channel, the average savings and loan amounts are calculated as the mean of the sample of individuals who saved with the institution or received loans only.

Note d: Share of portfolio comprises of the share of the total amount of each of informal, trade and formal loans from all total loans. Bank, NGO and CPEC loan shares are the share of each total amount of bank, NGO and CPEC loan from total formal loans. Share of savings portfolio comprises the share of the total amount of savings in each channel from the total amounts of savings.

Note e: Percentage calculated as a share of the number of entrepreneurs using the financial channel from the total number of entrepreneurs in each sub-sample.

Table 14 . Definition of Variables in the Simultaneous Equations Model of the Different Sources of Financing Shares Relative to Total Expenditure over Inputs.

Variables	Definition
Exogenous Variables	
K	Physical assets (FCFAs);
P	Total value of output (FCFAs);
T	Total cost of inputs (FCFAs);
EMPLY	Number of employees;
YRS	Number of years the enterprise has been in operation;
BKR	Dummy variable = 1 for bakeries;
MTL	Dummy variable = 1 for metal workshops;
TLR	Dummy variable = 1 for tailoring workshops;
CRP	Dummy variable = 1 for carpenter workshops;
TRD	Dummy variable = 1 for traders;
AGE	Age of the entrepreneur (Years);
EDUC	Educational level of the entrepreneur;
GENDER	Dummy variable = 1 for male entrepreneurs;
CPECM	Dummy variable = 1 for CPEC members;
RC	Rate of return on cash holdings;
IIL	Interest rate on informal loans;
RIH	Rate of return on informal holdings;
ITL	Interest rate on trade loans;
RD	Rate of return on deposits;
IFL	Interest rate on formal loans;
TCC	Transaction costs associated with cash holdings (Km);
TCIL	Transaction costs associated with informal loans (Km);
TCIH	Transaction costs associated with informal holdings (Km);
TCTL	Transaction costs associated with trade loans (Km);
TCD	Transaction costs associated with deposits (Km);
TCFL	Transaction costs associated with formal loans (Km);
Endogenous Variables	
CT	Cash holdings relative to total cost of inputs;
ILT	Informal loans relative to total cost of inputs;
IHT	Informal holdings relative to total cost of inputs;
TLT	Trade loans relative to total cost of inputs;
DT	Deposits relative to total cost of inputs;
FLT	Formal loans relative to total cost of inputs.

Table 15. **Reduced Form Equations of the Different Sources of Financing Relative to Total Expenditure Results (Linear-Log Functional Form).**

Variables	OLS (CT)	TOBIT (ILT)	TOBIT (IHT)	TOBIT (TL/T)	TOBIT (DT)	TOBIT (FLT)
Const	+	- **	+	-	- ***	- ***
LK	+	+ *	- **	+	+	-
LPT	-	-	+	+*	+ *	+ **
LEMPLY	-	-	+	-	-	-
LYRS	-	- **	-	+	-	-
MTL	-	+ *	-	+ *	-	-
CRP	- *	+	+	+ ***	-	-
TRD	+	+	-	+	+	-
BKR	+	-	-	+ ***	-	+
LAGE	+	+	-	-	+ **	+ ***
LEDUC	+	-	-	+	+ **	+ *
GENDER	-	+ ***	- ***	-	+	+ *
CPECM	-	+	- **	-	+ *	+
LRC	-	+ ***	-	-	+	-
LIIL	+	+ ***	-	+	-	-
LRIH	+ *	- ***	-	-	+	+
LITL	-	+	+	+	+	+
LRD	+ *	-	-	- **	+ *	+
LIFL	-	-	+ *	-	+ *	+ ***
LTCC	-	-	-	+	+	-
LTCIL	-	- *	+	-	+	+
LTCIH	-	+ ***	+ ***	+	-	+
LTCTL	-	+ *	-	+ ***	+	+
LTCD	-	-	-	-	+	-
LTCFL	+	- *	-	+	-	+ ***
R-SQR	0.08					
LH		19.93	-242.82	-551.22	-201.29	-87.92

***, ** & * represent significance at 1, 5 and 10 percent levels, respectively.

Table 16. Second-Stage Structural Equation Estimation of the Different Sources of Financing Relative to Total Expenditure (Linear-Log Functional Form).

Variables	OLS (CT)	TOBIT (ILT)	TOBIT (IHT)	TOBIT (TL/T)	TOBIT (DT)
Const.	0.87 (0 73)	-5.55 ** * (2.29)	1.03 (1.18)	-1 48 * (1.01)	-3.86 ** (1.68)
LK	0 01 (0 02)	0.04 (0 04)	-0 06 ** (0 03)	-0 01 (0 03)	0.01 (0.02)
LPT	-0.02 (0.03)	-0.03 (0.06)	0.05 (0 07)	0.11 ** (0 04)	0.07 * (0 05)
LEMPLY	-0.14 * (0.09)	-0.13 (0 18)	0.05 (0.19)	-0 11 (0 12)	0.06 (0 15)
LYRS	-0.06* (0.09)	-0.25 * (0.18)	-0.20 (0.16)	0.01 (0.13)	-0.11 (0.14)
MTL	-0.07 (0.22)	0.79* (0.43)	-0.30 (0.39)	0.38 * (0.27)	-0.04 (0.32)
CRP	-0.32 * (0.20)	0.41 (0 44)	0.05 (0.38)	0.54 ** (0.28)	-0 18 (0.33)
TRD	-0.01 (0.27)	0.39* (0.59)	-0.14 (0.46)	0 01 (0.57)	0.35 (0.36)
BKR	0.03 (0.35)	-0.03 (0.77)	-4.70 (581.91)	1.19 *** (0.50)	-0.63 * (0.59)
LAGE	0.04 (0.20)	0.86 * (0.62)	-0.27 (0.28)	-0.03 (0 26)	0.82 ** (0.46)
LEDUC	-0.01 (0.07)	-0.08 (0.13)	0.01 (0.11)	0.09 (0.10)	0.13 * (0.10)
GENDER	0.05 (0.02)	0.97 ** (0.50)	-0.59 * (0.35)	-0.51 * (0.39)	-0.03 (0.28)
CPECM	-0.01 (0.28)	0.39 (0.60)	-0.79 * (0.59)	0.45 (0.54)	0.56 * (0.39)
LRC	0.01 (0.07)				
LIIL	0.02 (0.02)	0.10 *** (0.02)			
LRIH		-0.47 *** (0.20)	-0.19 (0.15)		
LITL			-0.02 (0.05)	0.03 (0.03)	
LRD				-0.07 (0.10)	0.11** (0.06)
LIFL					0.16 (0.13)
LTCC	-0.04 (0.20)				
LTCIL	-0.07 (0.08)	-0.18 (0.15)			
LTCIH		0.30 ** (0.12)	0.55 *** (0.09)		
LTCTL			0.06 (0.13)	0.46 *** (0.06)	
LTCD				-0.37 (0.89)	0.21 (0.25)
LTCFL					-0.18 (0.25)
ILHAT	-3.41 (8.59)				
IHHAT		-0.02 (0.08)			
TLHAT			-0.01 (0.02)		
DHAT				-1.33 ** (0.63)	
FLHAT					0.28 ** (0.15)
CHI-SQR	10.42	36.09	77.08	87.98	67.06

Asymptotic standard errors are reported in parentheses.
***, ** & * represent significance at 1, 5 and 10 percent levels, respectively.